

**AMENDMENTS TO THE ABSTRACT**

The present invention provides a detector for use in medical and industrial applications for detecting high energy radiation, especially for use in ~~tomotherapy and other~~ image-guided radiotherapy systems. The detector is preferably housed in an enclosure. A plurality of detector elements are installed within the enclosure. The detector elements preferably include a substrate, a readout electrode layer deposited on at least one surface of the substrate, an amorphous selenium layer deposited on at least one surface of the readout electrode layer, and a high voltage electrode layer deposited on at least one surface of the amorphous selenium layer.